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动物分类学报

中国异饰肛螽属的修订 (直翅目, 螽斯总科, 蛩螽科)

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摘 要 本文是中国异饰肛螽属 *Acosmetura* Liu, 2000 的 1 个分类修订。有 6 个种被描述或重新描述, 其中有 1 新种和 1 新组合, 并给出该属的分种检索表。所有的模式标本均保存在中国科学院上海昆虫博物馆。

关键词 直翅目, 蛩螽科, 异饰肛螽属, 分类修订, 中国.
中图分类号 Q969.263.1

异饰肛螽属 Acosmetura **Liu, 2000**

Acosmetura Liu, 2000. *Zoological Research*, 21 (3): 220. 模式种: *Acosmetura brevicerca* Liu, 2000.

体小形。短翅类型。头顶钝圆锥形, 背面具沟; 下颚须端节长于亚端节。前胸背板沟后区不膨胀; 侧片较低, 后部渐趋狭, 无肩凹。前翅完全隐藏于前胸背板之下; 雄性具发音器, 雌性前翅侧置。前足基节具刺, 所有股 1 节腹面无刺, 膝叶端部钝圆。前足胫节内、外两侧听器均为开放型, 后足胫节具 3 对端距。雄性第 10 腹节背板短, 横宽; 尾须较短而简单; 下生殖板具腹突; 外生殖器革质, 裸露。雌性产卵瓣发达, 边缘光滑。

本属与华穹螽属 *Sinocyrtaspis* Liu, 2000 最为接近, 区别在于雄性前胸背板沟后区非强膨胀, 侧片后部渐趋狭。这个属为中国特有, 目前已知 6 种, 分布河南、四川、广西。

分种检索表

1 (8) 体背面具褐色纵带
2 (5) 后足股节端部非黑色
3 (4) 雌性下生殖板近乎圆形, 具中隆线; 雄性尾须和下生殖板如图 2~5 所示 ……… 短尾异饰肛螽 A. brevicerca **Liu, 2000**
4 (3) 雌性下生殖板长大于宽, 后缘内凹; 雄性未知 …………………………………… 凹缘异饰肛螽 A. emarginata **Liu, 2000**
5 (2) 后足股节端部黑色
6 (7) 后足股节内和外侧无褐色斜条纹; 雌性下生殖板后缘中央具浅凹口; 雄性未知 ……………………………………………… 黑带异饰肛螽 A. nigrovittata (**Liu** et **Bi, 1994**)
7 (6) 后足股节内和外侧具褐色斜条纹; 雄性第 10 腹节背板后缘中央具 1 小刺; 雌性未知 …………………………………… 黑膝异饰肛螽 A. nigrogeniculata (**Liu** et **Wang, 1998**)
8 (1) 体背面无褐色纵带
9 (10) 雄性尾须强内弯, 几乎完全隐藏于第 10 腹节背板之下; 雌性下生殖板无侧隆线 ……………………………………………… 雅安异饰肛螽 A. yachowensis (**Tinkham, 1944**)
10 (9) 雄性尾须较直, 大部分裸露于第 10 腹节背板之外; 雌性下生殖板具明显的侧隆线 …………………………………… 峨眉异饰肛螽, 新种 A. emeica **sp. nov.**

短尾异饰肛螽 Acosmetura brevicerca **Liu, 2000** (图 1~5)

Acosmetura brevicerca Liu, 2000. *Zoological Research*, 21 (3): 221, figs. 12-16.

雄性 体小, 略粗壮。头较短宽, 头顶呈钝圆锥形突出, 背面具沟; 复眼小, 圆形, 突出; 下颚须端节略微长于亚端节。前胸背板沟后区非扩张, 后缘宽圆侧片较低, 后部趋狭, 无肩凹。前翅小, 完全隐藏于前胸背板之下, 相互重叠。前足胫节内、外刺排列为 4, 4 (1, 1) 型。后足胫节背面内外缘各具 23 个刺。雄性第 9 腹节背板后侧角延长, 第 10 腹节背板后缘中央具半圆形凹口; 尾须甚短, 端部内弯, 顶端较钝; 下生殖板延长, 后缘中央具三角形凹口, 腹突较短; 外生殖器裸露, 端部略上翘。

雌性 前翅侧置。尾须短, 圆锥形; 下生殖板近圆形, 端缘微内凹, 中央具弱的隆线; 产卵瓣较宽, 微向上弯曲, 边缘光滑。

体淡绿色, 背面具褐色纵带, 纵带两侧具淡黄色条纹, 前胸背板尤为显著。复眼黑褐色。

测量单位: mm。

	体长	前胸背板长	前翅长	后足股节长	产卵瓣长
♂	10.5	4.0	1.0	9.5	
♀	12.5	4.2	0.8	10.5	6.5

检视标本: 正模 ♂, 副模 ♀, 广西 (兴安猫儿山), 900~1 500 m, 1992-07-22~23, 刘宪伟、殷海生采。

分布: 中国 (广西)。

凹缘异饰肛螽 Acosmetura emarginata **Liu, 2000** (图 6~7)

Acosmetura emarginata Liu, 2000. *Zoological Research*, 21 (3): 221, figs. 17-18.

雌性 体小, 略粗壮。头较短宽, 头顶呈钝圆

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1

2　　3　　4　　5

图 1~ 5　短尾异饰肛螽 *Acosmetura brevicerca* Liu, 2000

1. 雄性整体侧面观（male body, lateral view）　2. 雄性腹端背面观（end of abdomen of male, dorsal view）　3. 雄性腹端侧面观（end of abdomen of male, lateral view）　4. 雄性腹端腹面观（end of abdomen of male, ventral view）　5. 雌性下生殖板腹面观（subgenital plate of female, ventral view）

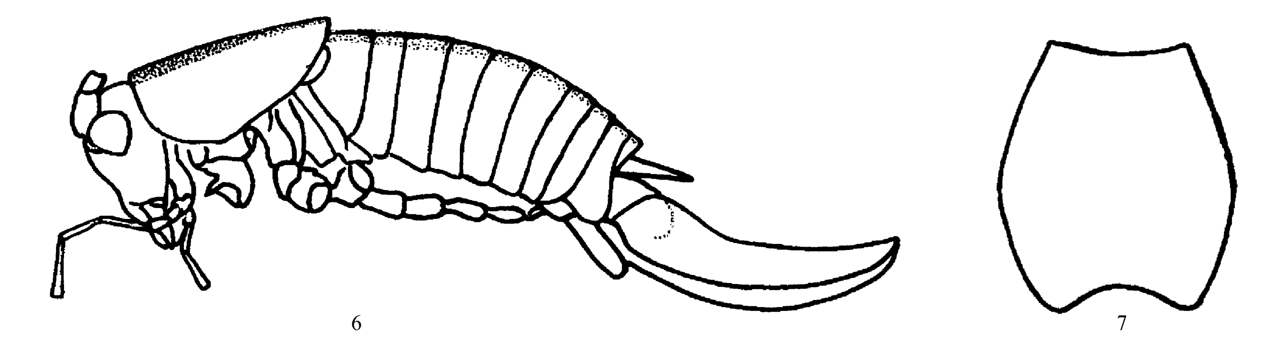


图 6~ 7　凹缘异饰肛螽 *Acosmetura emarginata* Liu, 2000, ♀

6. 侧面观（lateral view）　7. 下生殖板腹面观（subgenital plate, ventral view）

锥形突出，背面具沟；复眼小，圆形，突出；下颚须端节略微长于亚端节。前胸背板沟后区非扩张，后缘宽圆。前翅小，完全隐藏于前胸背板之下，侧置。前足胫节内、外刺排列为 4，4（1，1）型。后足胫节背面内外缘各具 24~ 27 个刺。下生殖板长大于宽，端缘内凹；产卵瓣较宽，微向上弯曲，边缘光滑。

体淡绿色，背面具褐色纵带。复眼黑褐色，触角具稀疏的暗色环纹，后足胫节刺淡褐色。

雄性未知。

测量单位: mm。

	体长	前胸背板长	前翅长	后足股节长	产卵瓣长
♀	10.0	3.5	0.5~0.8	10.0	4.5~5.0

检视标本: 正模♀, 四川(雅安), 1988-04-10, 冯炎采; 2♀♀, 四川(雅安周公山), 1 400 m, 2006-08-02, 周顺采。

分布: 中国(四川)。

黑带异饰肛螽 Acosmetura nigrovittata (**Liu** et **Bi, 1994**) (图 8~11)

Cosmetura nigrovittata Liu *et* Bi, 1994. *Acta Zootaxonomica Sinica*, 19 (3): 329, figs 5-10.

Acosmetura nigrovittata Liu, 2000. *Zoological Research*, 21 (3): 220.

雌性 前翅侧置。前足胫节内、外刺排列为 4, 3 (1, 1) 型。后足胫节背面内外缘各具 32~38 个刺。第 10 腹节背板后缘具两尖叶, 肛上板较小, 近三角形。尾须短, 圆锥形; 下生殖板横宽, 近半圆形, 端缘中央具弱的凹口; 产卵瓣较宽而短, 端半部稍向上弯曲, 边缘光滑。

体淡褐黄色(活时可能为绿色), 背面具黑褐色纵带, 但在前胸背板沟后区分叉。复眼黑褐色, 后足股节端部暗黑色, 后足胫节刺淡褐色。

测量单位: mm。

	体长	前胸背板长	前翅长	后足股节长	产卵瓣长
♀	11.8	4.0	0.8	11.0	6.1

检视标本: 正模♀, 四川都江堰青城山, 1987-08-10, 刘宪伟采。

分布: 中国(四川)。

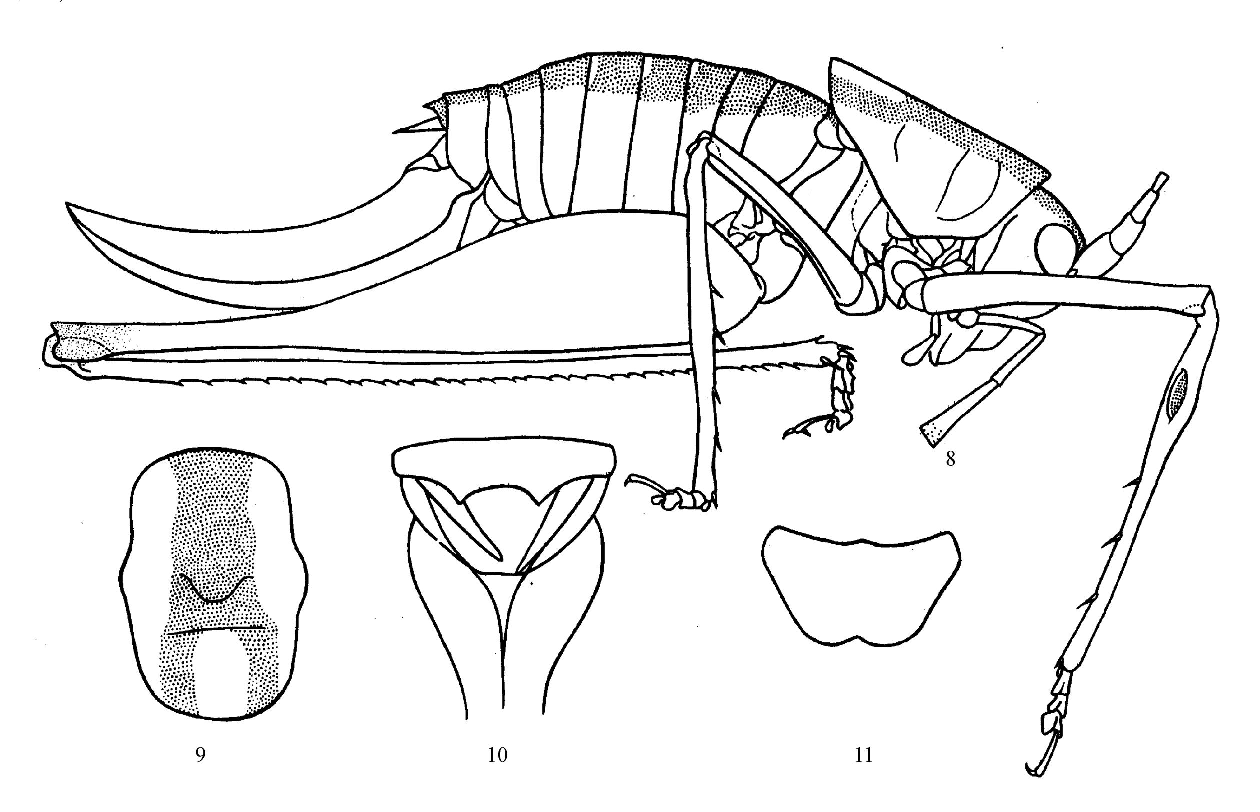


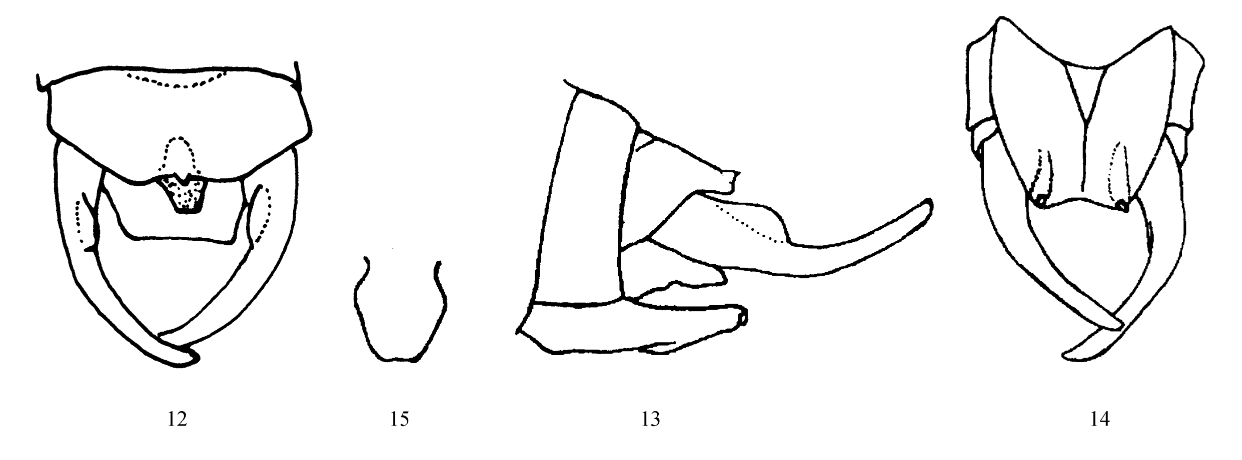
图 8~11 黑带异饰肛螽 *Acosmetura nigrovittata* (Liu *et* Bi, 2000), ♀
8. 侧面观 (lateral view) 9. 前胸背板背面观 (pronotum, dorsal view) 10. 腹端背面观 (end of abdomen, dorsal view) 11. 雌性下生殖板腹面观 (subgenital plate, ventral view)

黑膝异饰肛螽 A. nigrogeniculata (**Liu** et **Wang, 1998**) (图 12~15, 表 1)

Cosmetura nigrogeniculata Liu *et* Wang, 1998. *Henan Science*, 16 (1): 72, figs. 10-14.

Acosmetura nigrogeniculata Liu, 2000. *Zoological Research*, 21 (3): 220.

雄性 体小, 略粗壮。头较短宽, 头顶呈钝圆锥形突出, 背面具沟; 复眼小, 圆形, 突出; 下颚须端节略微长于亚端节。前胸背板沟后区不扩张, 后缘宽圆; 侧片较低, 后部趋狭, 无肩凹。前翅小, 完全隐藏于前胸背板之下, 仅从侧面可见。前足胫节内、外刺排列为 4, 4 (1, 1) 型。后足胫节背面内外缘各具 24~26 个刺, 端距 3 对。第 10 腹节背板后缘中央具 1 小刺; 尾须较长, 圆柱形, 弧形内弯, 顶端钝, 背面近基部具 1 弱的圆叶; 下生殖板较宽大, 后缘微凹, 腹突较短小; 外生殖器裸露, 端部



12 15 13 14

图 12~ 15 黑膝异饰肛螽 *Acosmetura nigrogeniculata*（Liu *et* Wang，1998），♂
12. 腹端背面观（end of abdomen，dorsal view） 13. 腹端侧面观（end of abdomen，lateral view） 14. 腹端腹面观（end of abdomen，ventral view） 15. 外生殖器端部背面观（apex of genitalis，dorsal view）

略呈鸭嘴状。

雌性未知。

体淡绿色，背面具褐色纵带。后足股节内、外侧均具褐色斜条纹，膝部和尾须褐色至暗褐色。

测量单位：mm。

	体长	前胸背板长	前翅长	后足股节长	产卵瓣长
♂	13.0	4.8	1.5	12.0	

研究材料：正模 ♂，河南（内乡宝天墁），1 720 m，1985-08-15，孙红泉采。

分布：中国（河南）。

雅安异饰肛螽 Acosmetura yachowensis **(Tinkham, 1944) comb. nov.**（图 16~ 18）

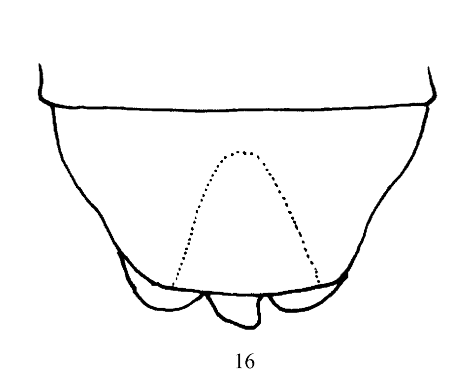
Xiphidiopsis yachowensis Tinkham, 1944. Proc. U. S. Nat. Mus., 94: 509, fig. 157, d.

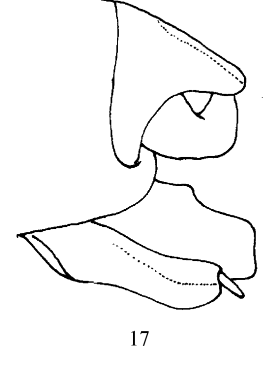
Thaumaspis yachowensis Bey-Bienko, 1957. *Ent. Obozr. Moscow*, 36: 412.

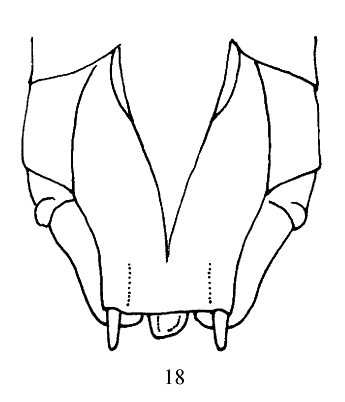
Thaumaspis yachowensis Liu *et* Jin, 1994. *Contr. Shanghai Inst. Entomol.*, 11: 109.

Thaumaspis yachowensis Jin *et* Xia, 1994. *J. Orth. Res.*, 3: 26.

雄性（新描述） 体小，略粗壮。头较短宽，头顶呈钝圆锥形突出；复眼小，圆球形，突出；下颚须端节与亚端节等长。前胸背板沟后区不扩张。前翅小，端缘圆截形。前足胫节内、外刺排列为 3，3（1，1）型。后足胫节背面内、外缘各具 14~ 20 个刺。第 10 腹节背板略延长，后缘圆截形，背面中央略低凹；尾须较简单，强内弯，几乎完全隐藏于第 10 腹节背板之下，端半部略扁平；下生殖板后缘平直，具腹突；外生殖器革质，端部稍超过下生殖板后缘，不对称。







16 17 18

图 16~ 18 雅安异饰肛螽 *Acosmetura yachowensis*（Tinkham，1944）
16. 雄性腹端背面观（end of abdomen of male，dorsal view） 17. 雄性腹端侧面观（end of abdomen of male，lateral view） 18. 雄性腹端腹面观（end of abdomen of male，ventral view）

雌性下生殖板端缘圆截形；产卵瓣较宽，微向上弯曲。

研究材料：5 ♂♂，3♀♀，四川（磨西镇海螺沟），2 100 m，2006-07-31，周顺采。

分布：中国（四川）。

蛾眉异饰肛螽，新种 Acosmetura emeica **sp. nov.**（图19～22）

雄性 体小，略粗壮。头较短宽，头顶呈钝圆锥形突出；复眼小，圆球形，突出；下颚须端节与亚端节等长。前胸背板沟后区不扩张。前翅小，端缘圆截形。前足胫节内、外刺排列为4，3（1，1）型。后足胫节背面内、外缘各具17～22个刺。第10腹节背板横宽，后缘截形；尾须较直，端部扩宽，具钩状突起；下生殖板后缘平直，腹突较短小；外生殖器裸露，稍超过下生殖板后缘，后端具弱缺刻。

雌性下生殖板较大，具明显的侧隆线，端缘宽圆形；产卵瓣较宽，微向上弯曲。

体淡绿色。复眼黑褐色，触角具稀疏暗色环。

测量单位：mm。

	体长	前胸背板长	前翅长	后足股节长	产卵瓣长
♂	8.0～9.0	3.0	1.0	7.0	
♀	10.5～11.0	3.4	0.8	7.8～8.0	5.0～5.5

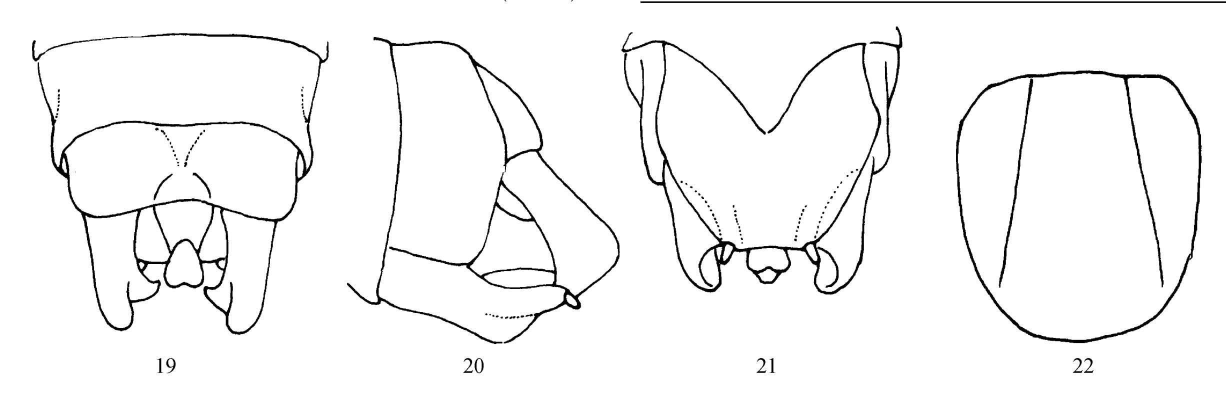


图19～22 蛾眉异饰肛螽，新种 *Acosmetura emeica* sp. nov.

19. 雄性腹端背面观（end of abdomen of male, dorsal view） 20. 雌性腹端侧面观（end of abdomen of female, lateral view） 21. 雄性腹端腹面观（end of abdomen of male, ventral view） 22. 外生殖器端部背面观（apex of genitalis, dorsal view）

正模 ♂，副模2 ♂♂，3♀♀，四川（峨眉山洗象池），2 140 m，2006-08-08，周顺采。

分布：中国（四川）。

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Liu, X-W and Jin, X-B 1994. List of Chinese Stenopelmatoidea and Tettigonioidea (Grylloptera). *Contr. Shanghai Inst. Ent.*, 11: 109.

Tinkham, E. R. 1944. Twelve new species of Chinese leaf-katydids of the genus *Xiphidiopsis*. *Proc. U. S. nat. Mus.*, 94: 505-527.

A TAXONOMIC REVISION OF THE GENUS ACOSMETURA FROM CHINA (ORTHOPTERA, TETTIGONIOIDEA, MECONEMATIDAE)

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Abstract A taxonomic revision of the genus *Acosmetura* Liu, 2000 is presented. Six species are described or re-described, including a new species and a new combination. A key to the species of the genus is given.

All type specimens are deposited in Shanghai Entomological Museum, CAS.

Key to the species of Acosmetura

1 (8) Dorsal surface of body with a longitudinal brown band
2 (5) Apex of hind femora not darkish
3 (4) Female subgenital plate nearly rounded, with a medial keel; shape of male cerci and subgenital plate as in Figs. 2-4 ………………………………………………………… A. brevicerca **Liu, 2000**
4 (3) Female subgenital plate longer than wide, with concave hind margin; male unknown …………… A. emarginata **Liu, 2000**
5 (2) Apex of hind femora darkish
6 (7) Hind femora not striated on the internal and external surface; female subgenital plate transverse, semicircular, with a shallow incision at hind margin; male unknown …………………………………………………………………… A. nigrovittata **(Liu** et **Bi, 1994)**
7 (6) Hind femora striated with brown on the internal and external surface; male tenth abdominal tergite with a small spine at middle of hind margin; female unknown ………………………………………………… A. nigrogeniculata **(Liu** et **Wang, 1998)**
8 (1) Dorsal surface of body without a longitudinal brown band
9 (10) Male cerci strongly incurved, nearly covered by the tenth abdominal tergite; subgenital plate of female without lateral keels ……………………… A. yachowensis **(Tinkham, 1944)**
10 (9) Male cerci straight, not covered by the tenth abdominal tergite; subgenital plate of female with distinct lateral keels ………………………………………… A. emeica **sp. nov.**

Acosmetura yachowensis **(Tinkham, 1944) comb. nov.** (Figs. 17-20)

The original description by Tinkham (1944) on the base of a single female from the Sichuan Ya' an (= Yachow). Brachypterous species, female subgenital plate with rounded truncate apical margin and much broader ovipositor. The description of the male is given below.

Description. Male (nov.) Rather small size, form of heavy build. Head short and broad, with bluntly conical fastigium; eyes small, rounded, length of apical and subapical segment of maxillary almost equal. Pronotum with metazoan not extended. Tegmen small, with apical margin roundly truncated. Fore tibiae armed with 3 inner, 3 outer spines and a pair of apical spurs. Each side of hind tibiae with 14-20 spines above. Tenth abdominal tergite elongate, with roundly truncated hind margin, dorsal surface slightly depressed in middle; cerci strongly incurved, nearly covered by tenth abdominal tergite; subgenital plate with truncate hind margin, with styles; genitalia sclerous, its apex extending the hind margin of subgenital plate.

Coloration greenish, eyes darkish brown, spines of hind tibiae with dark apex.

Measurements in mm.

Material studied. 5 ♂♂, 3♀♀, Sichuan (Moxizhen Hailuogou), 2 100 m, 30-31 July 2006, collected by ZHOU Shun.

	Body	Pronotum	Tegmen	Hind femora	Ovipositor
♂	8.0-10.0	3.5-4.0	1.0-1.5	7.5-8.0	
♀	9.0-12.0	3.4-3.7	0.8	7.5-8.8	5.4-5.6

Distribution. China (Sichuan).

Acosmetura emeica **sp. nov.** (Figs. 21-24)

Description. Male (holotype) Rather small size, form of heavy build. Head short and broad, with bluntly conical fastigium; eyes small, rounded, length of apical and subapical segment of maxillary almost equal. Pronotum with metazoan not extended. Tegmen small, with apical margin roundly truncated. Fore tibiae armed with 4 inner 3 outer spines and a pair of apical spurs. Each side of hind tibiae with 17-22 spines above. Tenth abdominal tergite transverse, with truncated hind margin; cerci straight, not covered by tenth abdominal tergite, apex widened with a hook-like ventral process; subgenital plate with truncate hind margin, with small styles; genitalia sclerous, its apex extending the hind margin of subgenital plate.

Female. Similar to male, but cerci short, conical. Subgenital plate large, hind margin broadly rounded, with distinct lateral keels; ovipositor rather broad, slightly curved upwards, with smooth margins.

Coloration greenish, eyes darkish brown, antennae with dark rings.

Measurements in mm.

	Body	Pronotum	Tegmen	Hind femora	Ovipositor
♂	8.0-9.0	3.0	1.0	7.0	
♀	10.5-11.0	3.40	0.8	7.8-8.0	5.0-5.5

Holotype ♂, Sichuan (Emei, Xixiangchi), 2 140 m, 8 Aug. 2006, collected by ZHOU Shun. Paratypes: 2 ♂♂, 2♀♀, same data as holotype.

This new species is similar to *A. yachowensis* Tinkham, 1944 but differs in the short tenth abdominal tergite, shape of male cerci and female subgenital plate with distinct lateral keels.

Distribution. China (Sichuan).

Key words Orthoptera, Meconematidae, *Acosmetura*, taxonomic revision, China.